

The focal takotsubo syndrome presenting with the snail-like left ventricle

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Focal takotsubo syndrome (TTS) is a rare, atypical type of TTS reported in 2004 as anterior akinesis of the left ventricle (LV) with no coronary changes. Based on the International Takotsubo Registry, it occurs in about 1.5% of cases. To date, this uncommon form has not been called anything other than “focal”. Typical left ventricular apical ballooning resembled a *takotsubo* (jap. *tako* — octopus, *subo* — pot), hence the then-novel disease was named after it. In our observation, the LV in focal TTS can resemble a snail in imaging studies.

A 70-year-old female was referred to the hospital due to severe angina. It started 2 days before admission caused by severe emotional distress. The electrocardiogram showed ST-segment elevation in leads II, III, and aVF, with a QTc interval of 454 ms, a heart rate of 74 bpm and increased high sensitivity troponin I levels (3.4 ng/mL), while the maximum B-type natriuretic pep-

tide concentration did not exceed 120 pg/mL. Vital signs remained stable. The patient was subsequently qualified for urgent cardiac catheterization, which revealed no obstructive coronary artery disease and akinesis of the mid-anterior heart segment on ventriculography. The LV shape during systole resembled a snail (Fig. 1A, B, **Suppl. Video 1**). Echocardiography confirmed the presence of LV anterior wall akinesis (Fig. 1C, D), which was visualized objectively with longitudinal strain (Fig. 1E). However, the echo abnormalities were transient — a feature typical for TTS. The patient remained asymptomatic and was discharged home on the 6th day of hospitalization. Contractile dysfunction was not observed after a 5-week follow-up.

In such cases, even if the initial imaging is not typical for TTS (snail-like image) and clinical suspicion is high, TTS should not be excluded.

Conflict of interest: None declared

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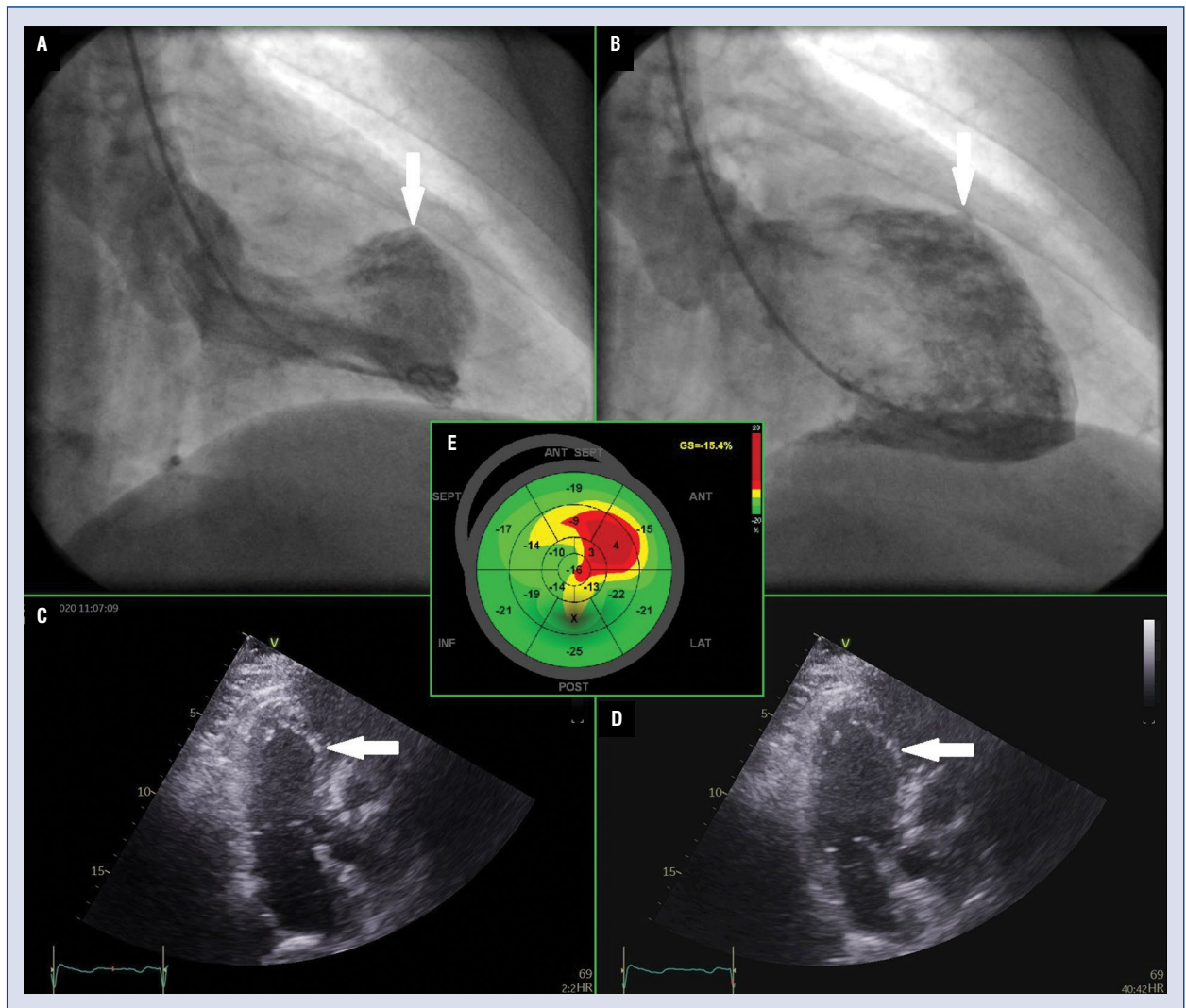


Figure 1. Ventriculography showing the snail-like shape of left ventricle (LV) and focal akinesis of its anterior wall in systole (A) and LV in diastole (B). The same regional wall motion abnormalities were observed in echocardiography during systole (C) and in diastole (D). White arrows mark the akinetic segment. Display of regional longitudinal strain (Bull's Eye Plot) showed abnormal LV longitudinal strain, systolic lengthening of mid anterolateral segment (E).